

FRIARGATE COURT

TOTEM M-CHP SYSTEM FOR STUDENT ACCOMMODATION



Friargate Court, a 244-room luxury student residential scheme, is a recent addition to Preston's growing University Quarter. Envisioned by student accommodation specialists Portergate, Friargate provides boutique hotel class living a short walk away from the University of Central Lancashire.

The domestic hot water system supplied by Adveco Ltd. which serves Friargate consists of a TOTEM T10 m-CHP unit with two BFC60 condensing gas after-heaters. This CHP installation helped the building to meet Part L2A of the Building Regulations and local planning requirements, and additionally saves over £3,600 per year in energy costs. These savings result in a system which is far more cost-effective than alternative renewable technologies.

Customer
Preston University

Sector
Higher Education

Location
Preston, UK

Application
Central heating and domestic hot water

Products
Totem T10 m-CHP
A.O. Smith BFC60

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The Adveco TOTEM and two BFC water heaters provide the thermal load in a central energy centre that serves Friargate's domestic hot water demands.

CHP units provide on-site cogeneration of heat and power, and are one of the most effective ways of reducing emissions in heating and DHW systems.

Electricity is produced at the point of consumption by an automotive engine coupled directly to a generator, and the waste heat produced in the process is recovered by heat exchangers to be used as a free source of heat for the building.

The TOTEM maximises cogeneration efficiency through superb design quality. A 1.4L Fiat Fire engine supplied by Fiat Chrysler Automobiles and tuned by partner Magneti Marelli cuts emission levels to less than 10% of most other m-CHP units on the market. Three integrated heat exchangers and the capability to condense allow the recovery of almost all waste heat from the engine and components. A self-change oil system reduces maintenance demand and extends the unit lifetime, all further contributing to running cost savings of over 25%.

Combined heat and power (CHP) systems are ideally suited to serve large accommodation buildings, where the majority of the annual energy

consumption is attributed to domestic hot water demands and there is a continuous background electricity demand.

"As professionals, we are always looking at various options on behalf of our clients to ensure that the requirements of Part L2 are not only met, but where possible exceeded," said James Massey, Projects Director, TACE.

"We are also very conscious of the increasing impact NO_x emissions have on localised air quality. The Adveco Totem CHP enabled us to deliver an effective, efficient and environmentally friendly solution due to its combination of total efficiency, reductions in Carbon Dioxide and ultra-low NO_x emissions," adds James.

The Adveco TOTEM delivers the very best in micro-CHP performance, delivering market-leading efficiencies and ultra-low NO_x and CO emissions to provide a clean and cost-effective result.

TOTEM M-CHP

- Purpose-built for operation on natural gas
- Combined Heat and Power range with outputs of 10, 20, 25 and 50 kWe
- Total cogeneration efficiency up to 107.4%
- Ultra-low emissions: NO_x at <12 mg/kWh and <10 mg/Nm³,
- CO at <10 mg/Nm³
- Unparalleled reliability.
- Eligible for full points under the revised POL02 category of the 2018 BREEAM New Construction Scheme, even when installed in high pollution urban areas.



With almost 50 years of industry experience, Adveco Ltd. is the trusted specialist provider of bespoke hot water, heating and power systems to the building services industry. Committed to partnering with its commercial and government customers, Adveco helps create comfortable, efficient, functional, safe and sustainable buildings through invaluable support in the design, supply, commissioning and service of business-critical hot water, heating and power. Headquartered in the UK, the company operates across Europe from offices in the Netherlands and Belgium.

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